

Application S.N. 10/721,364
May 22, 2006
Reply to the Office Action dated February 7, 2006
Page 7 of 9

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application.

Applicant appreciates the Examiner's indication that Claim 16 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims.

Claims 1-15 and 17-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Abe et al. (U.S. 6,424,504). Applicant respectfully traverses the rejection of Claims 1-15 and 17-20.

Claim 1 recites:

An electrostatic actuator comprising:
a substrate;
a stationary electrode including a plurality of electrode plates disposed on the substrate in a comb-like pattern; and
a movable piece supported on the substrate and including a movable electrode including a plurality of electrode plates extending toward the electrode plates of the stationary electrode and arranged in a comb-like pattern; wherein

in one of the stationary electrode and the movable electrode, at least one of the lengths of the plurality of electrode plates is different from a length of another of the plurality of electrode plates;
and

the movable electrode displaces the movable piece by an electrostatic force generated between the movable electrode and the stationary electrode. (emphasis added)

With the unique combination and arrangement of features recited in Applicant's Claim 1, including the feature of "in one of the stationary electrode and the movable electrode, at least one of the lengths of the plurality of electrode plates is different from a length of another of the plurality of electrode plates," Applicant has been able to provide an electrostatic actuator in which the movable piece can be displaced into its stable state and can be prevented from being inclined, which greatly improves the reliability of the electrostatic actuator (see, for example, the first full paragraph on page 5 of the originally filed specification).

Application S.N. 10/721,364

May 22, 2006

Reply to the Office Action dated February 7, 2006

Page 8 of 9

In Section No. 2 on page 2 of the outstanding Office Action, the Examiner alleged that Abe et al. teaches all of the features recited in Applicant's Claim 1, including the feature of "in one of the stationary electrode and the movable electrode, at least one of the lengths of the plurality of electrode plates is different from a length of another of the plurality of electrode plates." The Examiner alleged that Fig. 6 and lines 11-26 of col. 3 of Abe et al. teach this feature. Applicant respectfully disagrees.

Lines 11-26 of col. 3 of Abe et al. disclose:

In a specific structure in which a plurality of actuators are provided to provide different relative moving distances, each of the actuators comprises a first comb-like electrode formed on the opposing face of the first substrate, and having a plurality of parallel teeth aligned at the leading ends thereof; and a second electrode formed on the opposing face of the second substrate, and having a plurality of parallel teeth aligned at the leading ends thereof so as to be placed between the adjoining teeth of the first electrode and to extend outside the leading ends of the teeth of the first electrode in an undriven state, the outer ends of the extending portions of the plurality of teeth being moved to the leading ends of the teeth of the first electrode in a driven state in order to cause the substrates to move relative to each other. **The outside extending portions of the second electrode teeth are different in length among the actuators.** (emphasis added)

It is clear from this portion of Abe et al. that Abe et al. merely discloses that the length of the electrode teeth in one actuator is different from the length of the electrode teeth in another actuator (see the dimensions L1 and L2 in Fig. 6 of Abe et al.). However, each of the electrode teeth in each of the individual actuators has the same length, and none of the individual actuators includes electrode teeth having different lengths.

Thus, Abe et al. clearly fails to teach or suggest the feature of "**in one of the stationary electrode and the movable electrode, at least one of the lengths of the plurality of electrode plates is different from a length of another of the plurality of electrode plates**" (emphasis added) as recited in Applicant's Claim 1.

Application S.N. 10/721,364
May 22, 2006
Reply to the Office Action dated February 7, 2006
Page 9 of 9

Accordingly, Applicant respectfully submits that, contrary to the Examiner's allegations, Abe et al. fails to teach or suggest the unique combination and arrangement of features recited in Applicant's Claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 102(b) as being anticipated by Abe et al.

In view of the foregoing remarks, Applicant respectfully submits that Claim 1 is allowable. Claims 2-20 depend upon Claim 1, and are therefore allowable for at least the reasons that Claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a One-Month Extension of Time, extending to June 7, 2006, the period for response to the Office Action dated February 7, 2006.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Dated: May 22, 2006

/Christopher A. Bennett #46,710/
Attorneys for Applicant

KEATING & BENNETT, LLP
8180 Greensboro Drive, Suite 850
Tyson's Corner, VA 22102
Telephone: (703) 637-1480
Facsimile: (703) 637-1499

Joseph R. Keating
Registration No. 37,368
Christopher A. Bennett
Registration No. 46,710